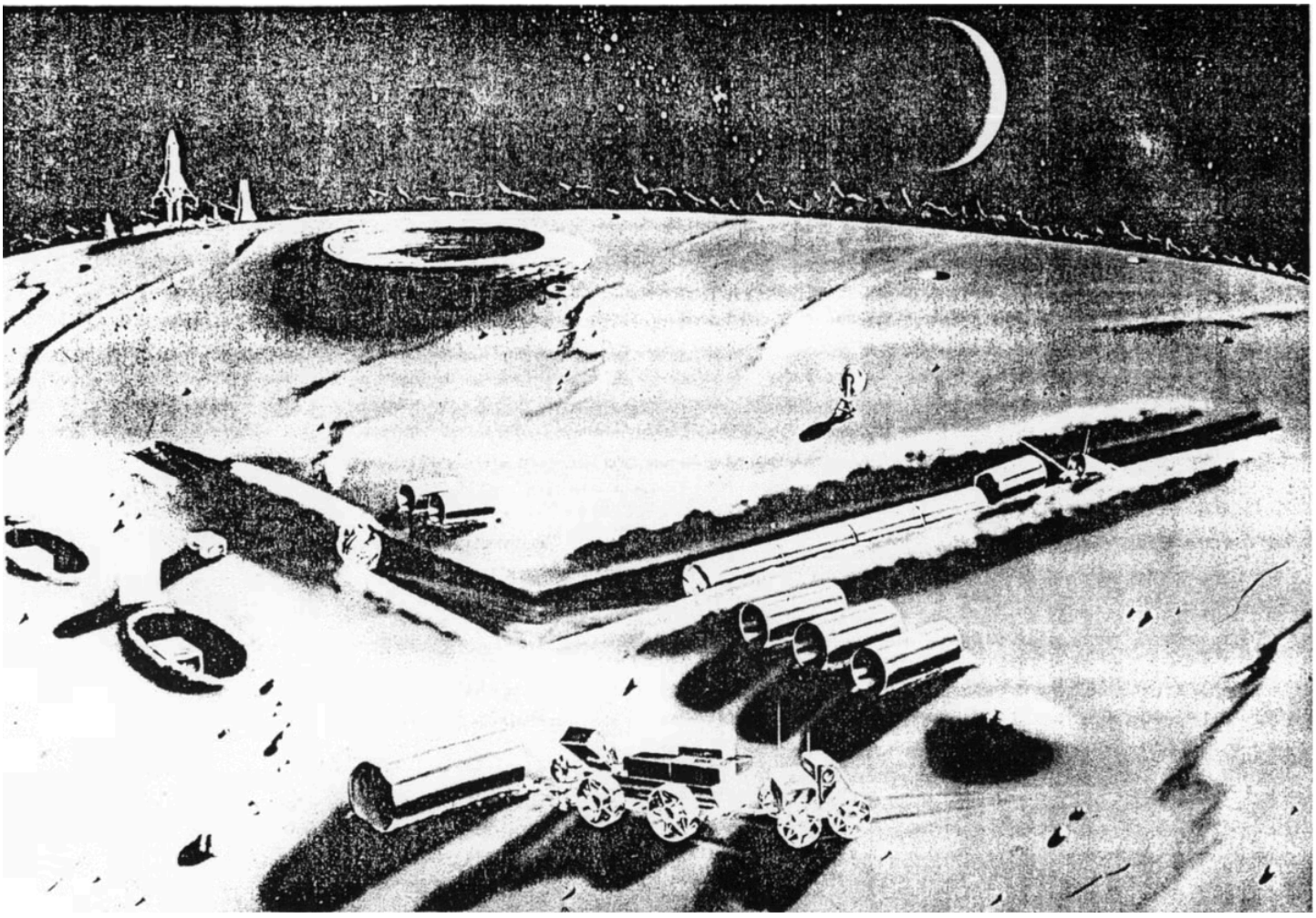
Remembering That Time the U.S. Army Planned to Put Soldiers on the Moon

Project Horizon would have sent troops to the moon by 1965 ... but the plan was far from cheap.

BY KYLE MIZOKAMI PUBLISHED: DEC 26, 2022 8:00 AM EST



U.S. Army

- In 1959, the U.S. Army published a **feasibility study** all about establishing a base on the **moon**.
- The base would be an observation post to spy on the **Soviets**, act as a communications relay, and could eventually even host weapons.
- Project Horizon would have been prohibitively expensive, clocking in at $58 billion in today's dollars.

In the heyday of the Atomic Age, a bold U.S. Army plan dreamed of taking the ultimate high ground: the moon itself. Project Horizon, the Army's study investigating the possibility of a permanent base on the **moon**, would have placed boots on lunar soil by 1965 along with a dozen soldiers by 1966. Although the plan was sound, the U.S. government ultimately chose to go ahead with a civilian moon program instead.

Between 1945 and 1989, the United States and the Soviet Union were deadlocked in what became known as the Cold War. An ideological struggle, the **Cold War** saw the two countries compete against one another in virtually every endeavor, from the Olympics to military power. This competition even extended into space itself, and both sides struggled to outdo one another in a so-called "Space Race" to reach higher and farther into the heavens.

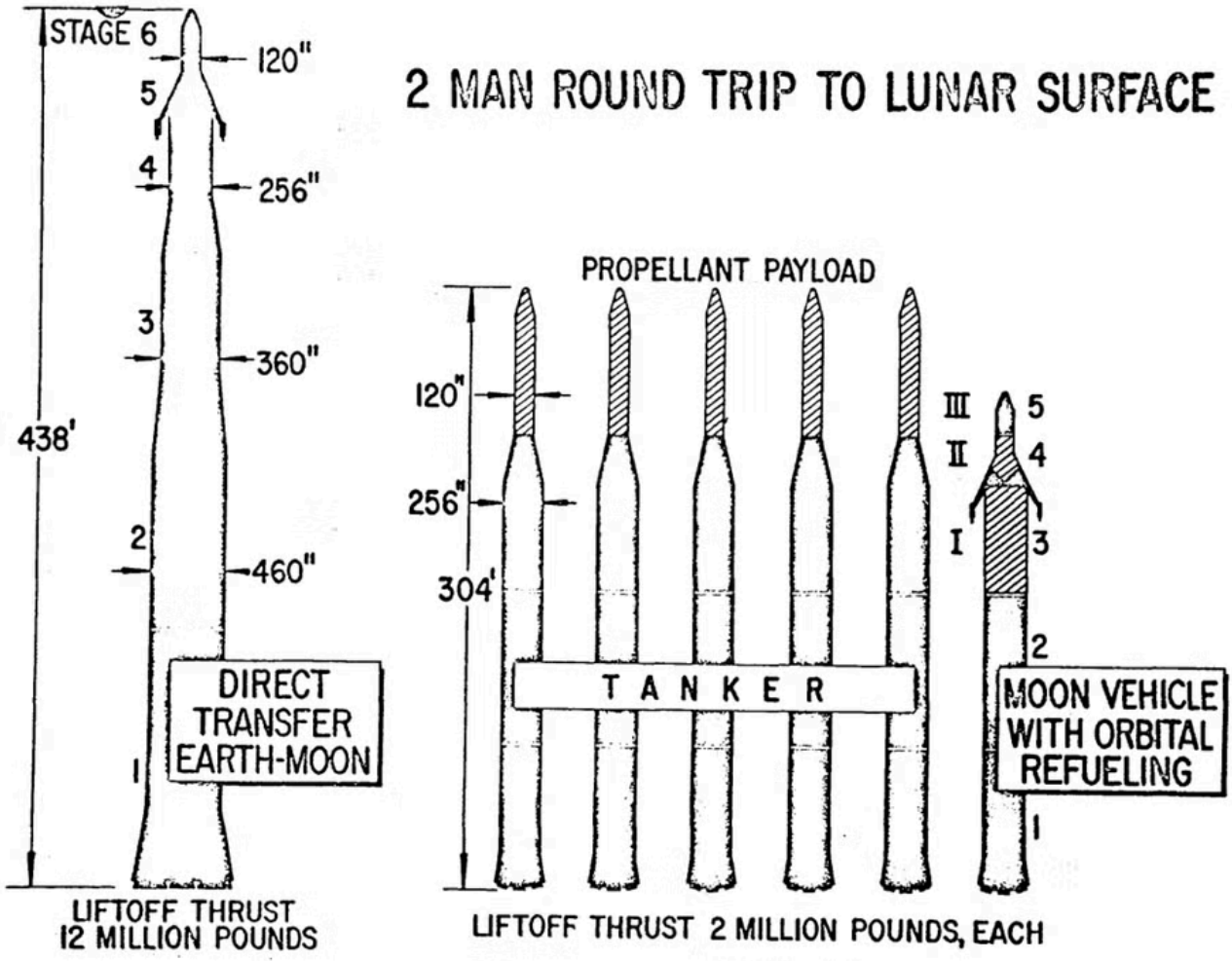


Fig. I-7. Two - Man Round Trip to Lunar Surface

US Army

Project Horizon would have relied upon literally scores of Saturn 1 and Saturn 2 rocket launches.

The Army Ballistic Missile Agency produced the **Project Horizon study (PDF)** in March 1959, and **Army Chief of Staff Maxwell Taylor** enthusiastically promoted the concept. The authors of the study argued the base would serve as an ideal location for spying on locations on planet Earth. This was considered extremely useful, as the Pentagon was desperate to know what was going on inside the notoriously secretive Soviet Union. The moon was also proposed as a communications relay for U.S. forces worldwide with American soldiers, sailors, airmen, and Marines bouncing communications traffic off the moon and back to Earth.

Under the plan, **Saturn 1 and 2 rockets** (then under development) would send the building materials to the lunar surface. The project called for 61 Saturn 1 and 88 Saturn 2 launches through November 1966, depositing 490,000 pounds of cargo on the moon—an average of 5.3 launches per month. Another 64 launches would deposit an additional 266,000 pounds between December 1966 and December 1967.

These launches would send up everything needed to **construct the moon base**, including habitats, mission equipment, moon suits, furniture, food, oxygen, and even water. A human transport vehicle and a construction vehicle would make up the base's motor pool. The base, constructed of joined tubular habitats, would be large enough to support a complement of 12 soldiers.

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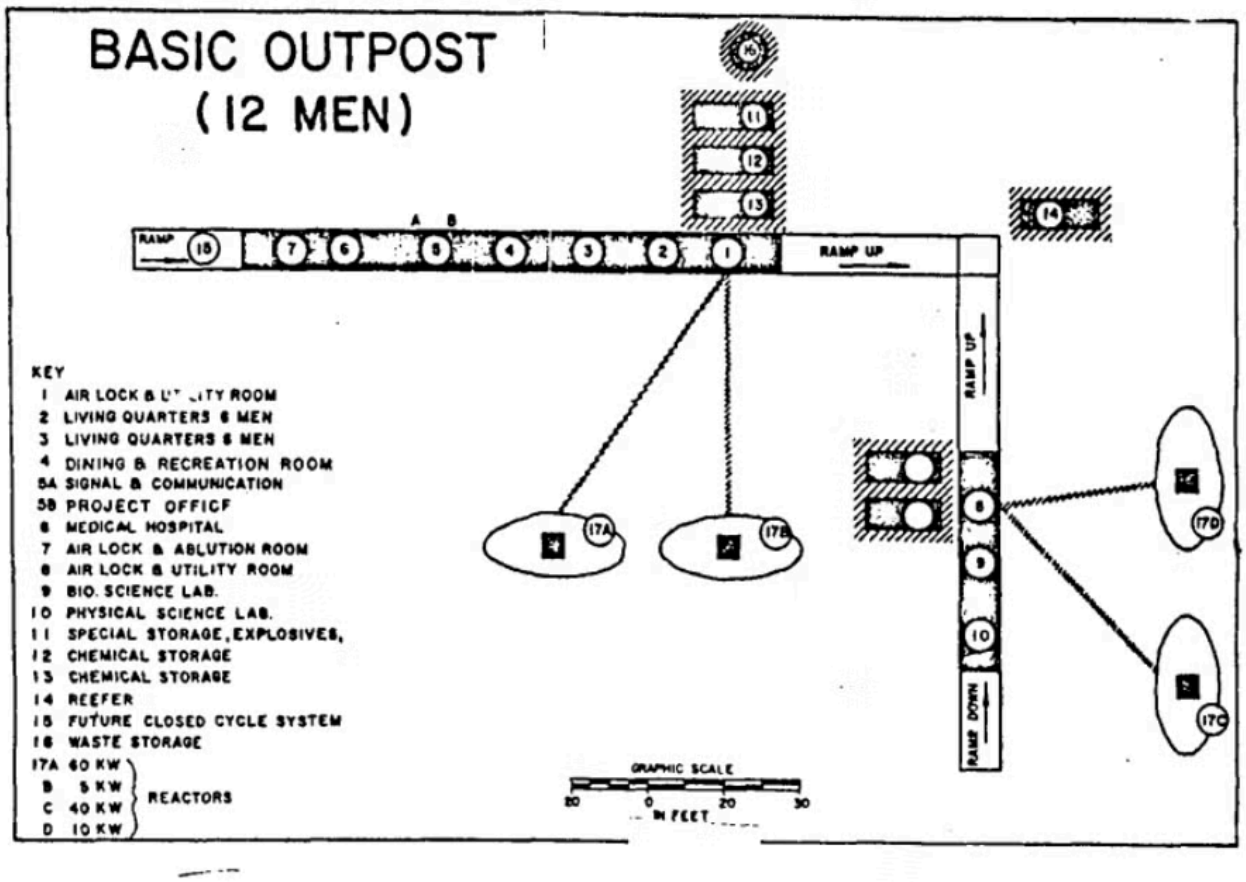
The first two soldiers would arrive on the moon in July 1965, and they would lay the groundwork for an additional ten soldiers that would arrive in 1966. Overall, the camp itself would take only 15 days to properly construct. Two **nuclear reactors** would provide power for the base.

The lunar surface is a harsh place with high levels of **radiation** from the sun and cosmic rays that originate outside our solar system. Meanwhile, temperatures can swing between 248 degrees and -202 degrees Fahrenheit. These conditions would force the base **underground**, where it would be protected by a thick layer of lunar soil. The construction vehicle would dig trenches, whereupon a construction team would lower the prefabricated habitats into the trench and bury them. The process—including the task of making two prefabricated habitats properly airtight—would have been complex and even dangerous.

Of the 12 inhabitants at the base, six would be devoted to maintaining the facility and life support at all times. This was, the report admitted, an enormous capital expenditure just to keep the other six soldiers doing productive things. As you read the Project Horizon report, you can't help but notice a built-in pressure to find practical and unique things for the crew to do in order to justify the billions of dollars spent on an Army moon base.

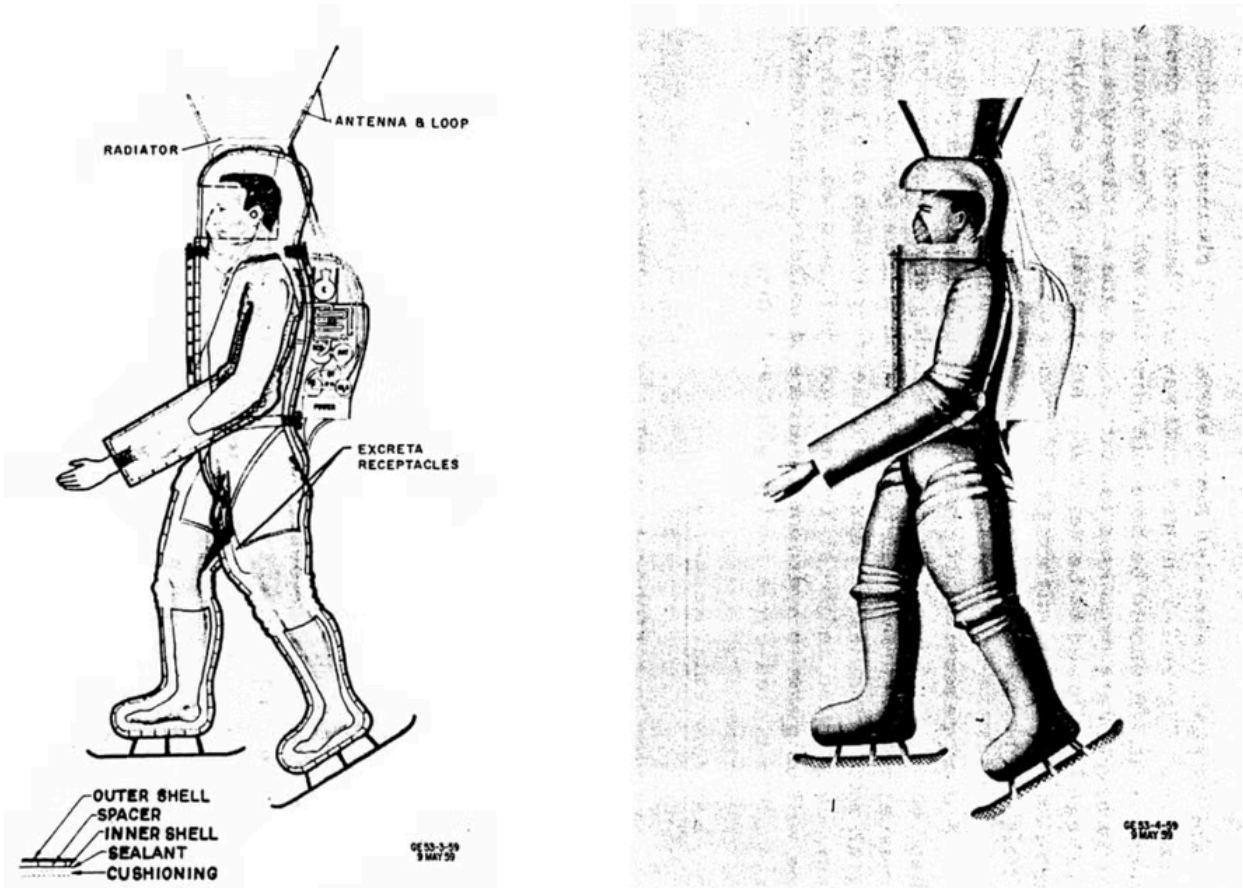

BASIC OUTPOST
(12 MEN)
KEY
1 AIR LOCK & UTILITY ROOM
2 LIVING QUARTERS 6 MEN
3 LIVING QUARTERS 6 MEN
4 DINING & RECREATION ROOM
5A SIGNAL & COMMUNICATION
5B PROJECT OFFICE
6 MEDICAL HOSPITAL
7 AIR LOCK & ABLUTION ROOM
8 AIR LOCK & UTILITY ROOM
9 BIO. SCIENCE LAB.
10 PHYSICAL SCIENCE LAB.
11 SPECIAL STORAGE, EXPLOSIVES,
12 CHEMICAL STORAGE
13 CHEMICAL STORAGE
14 REEFER
15 FUTURE CLOSED CYCLE SYSTEM
16 WASTE STORAGE
17A 60 KW
B 5 KW
C 40 KW
D 10 KW
REACTORS
RAMP
RAMP UP
RAMP DOWN
GRAPHIC SCALE
30 0 20 30
IN FEET

US Army

The layout of the initial 12-person base.

From the Army's point of view, the moon was a fortress made impregnable by distance—a huge advantage. Earth and the moon are **238,900 miles apart**, making it incredibly difficult for anyone to reach the Army base. Any nation attempting to reach the base would have to develop a space program advanced enough to send its own troops to the moon, an effort that would take years. "Moon-based military power will be a strong deterrent to war," the study stated, "because of the extreme difficulty, from the enemy point of view, of eliminating our ability to retaliate.

The "military power" the Horizon report alludes to is of course **nuclear weapons**. At the time, the United States and NATO fretted constantly about the prospect of surprise nuclear attack from the Soviet Union and China. This led to the Pentagon splitting its strategic nuclear deterrent between silo-based missiles, a permanent force of nuclear-armed bombers, and submarines with nuclear missiles. Moon-based nukes would have been America's ultimate ace in the hole, but it's also clear in the report that even the Army was uneasy about making mankind's first trip to a non-terrestrial world about basing nuclear weapons there.



US Army

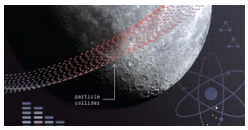
Early concept art for Army moon suits.

Project Horizon estimated that establishing a 12-person moon base would cost $6 billion in 1959 dollars—at a time when the entire defense budget was only $40 billion. Today, Horizon would cost $58 billion. President Eisenhower, who was likely aghast at the sheer cost ($500 million per base inhabitant), decided to cancel the program in the end.

Today, the **Artemis** program has refocused our gaze on lunar expeditions that have been dormant for nearly 50 years. It's a bittersweet feeling knowing that so much time has passed and so many opportunities have been squandered, but Project Horizon reminds us that the what-ifs are both good and bad. While it's easy to wish Eisenhower had spent the money to establish a permanent moon base, at least today we can look up at our celestial neighbor and still see a moon untainted with the weapons of mankind.

BEFORE YOU GO ...

Scientists Want to Build Noah's Ark on the Moon



How a Lunar Supercollider Could Upend Physics

KYLE MIZOKAMI

Kyle Mizokami is a writer on defense and security issues and has been at *Popular Mechanics* since 2015. If it involves explosions or projectiles, he's generally in favor of it. Kyle's articles have appeared at *The Daily Beast, U.S. Naval Institute News, The Diplomat, Foreign Policy, Combat Aircraft Monthly, VICE News*, and others. He lives in San Francisco.